

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (cancelled):

Claim 2 (cancelled):

Claim 3 (previously presented) The planar reference electrode as set forth in claim 16, wherein the plate is selected from the group consisting of alumina, glass and plastic substance.

Claim 4 (previously presented): The planar reference electrode as set forth in claim 16, wherein the electrode is selected from the group consisting of Ag, Pd, Cu, Pt, Ag/AgCl, Ag containing 1-5 weight% of Pd and Ag coated with Nafion.

Claim 5 (cancelled):

Claim 6 (currently amended): The planar reference electrode as set forth in claim ~~5~~ 16, wherein the electrolyte is AgNO₃ or perchloric acid for a Ag electrode, KCl or NaCl for a Ag/AgCl electrode, and KOH or NaOH for a mercury/mercury oxide electrode.

Claim 7 (previously presented): The planar reference electrode as set forth in claim 16, wherein the non-porous protection membrane is formed by polyester.

Claim 8 (cancelled):

Claim 9 (cancelled):

Claim 10 (currently amended): A planar reference electrode comprising: a plate; an electrode connecting part; an electrode; an insulating membrane; an inner reference solution; a porous polymer membrane which functions as both a junction and a protection membrane, wherein the plate and the porous polymer membrane are formed of different materials the plate being formed of a material soluble in the porous polymer solution, wherein the porous polymer membrane is directly fixed to the plate, wherein the inner reference solution is an electrolyte containing hydrogel which consists of 85-99 weight% of glycerol solution, 1-10 weight% of agar solution, polymeric glue, and a soluble polymer dissolved with hygroscopic substrate.

Claim 11 (previously presented): The planar reference electrode as set forth in claim 10, wherein the porous polymer membrane is formed of cellulose nitrate.

Claim 12 (currently amended): The planar reference electrode as set forth in claim 10, wherein the plate is ~~selected from the group consisting of alumina, glass and polycarbonate.~~

Claim 13 (previously presented): The planar reference electrode as set forth in claim 10, wherein the electrode is selected from the group consisting of Ag, Pd, Cu, Pt, Ag/AgCl, Ag containing 1-5 weight% of Pd and Ag coated with Nafion.

Claim 14. (cancelled):

Claim 15 (currently amended): The planar reference electrode as set forth in claim 14 10, wherein the electrolyte is AgNO₃ or perchloric acid for an Ag electrode, KCl or NaCl for an Ag/AgCl electrode, and KOH or NaOH for a mercury/mercury oxide electrode.

Claim 16 (currently amended): A planar reference electrode comprising: a plate; an electrode connecting part; an electrode; an insulating membrane; an inner reference solution; a junction; and a non-porous protection membrane, wherein the junction is formed in a line of micro capillary, the line of micro capillary being formed as a vacancy within the insulating membrane by making the vacancy in forming the insulating membrane, wherein the inner reference solution

is an electrolyte containing hydrogel which consists of 85-99 weight% of glycerol solution, 1-10 weight% of agar solution, polymeric glue, and a soluble polymer dissolved with hygroscopic substrate.

Claim 17 (currently amended): A method for fabricating a the planar reference electrode of claim 16 which comprises:

- (1) forming an electrode connection part on a plate;
- (2) forming an electrode on the plate by using a screen printing method;
- (3) forming an insulating layer by screen printing on the electrode, to provide a well around the electrode and a line of micro capillary;
- (4) placing an inner reference solution within the well; and
- (5) forming a non-porous protection membrane to cover the inner reference solution.

Claim 18 (currently amended): A method for fabricating the planar reference electrode of claim 10 which comprises:

- (1) forming an electrode connection part on a plate;
- (2) forming an electrode on the plate by using a screen printing method;
- (3) forming an insulating layer by screening printing on the electrode, to provide a well around the electrode;
- (4) placing an inner reference solution within the well; and
- (5) forming a porous protection membrane to cover the inner reference solution.